NORTH CENTRAL FOREST EXPERIMENT STATION
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FOREST AREA IN MICHIGAN, 1980

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ABSTRACT.—In 1980 Michigan's forests covered 18.4 million acres, a decline of 5.2 percent from the 19.4 million acres reported in 1966. Commercial forest land dropped to 17.5 million acres.

KEY WORDS: Forest inventory, commercial forest land, noncommercial forest land.

One out of every 2 acres in Michigan is forested. These forested acres total 18.4 million acres in the State. Forest land covers more than four-fifths of the total land area in the Upper Peninsula, three-fifths of the land area in the northern half of Lower Michigan, but less than one-fifth of the land area in the southern half of the Lower Peninsula. Keweenaw County in the Western Upper Peninsula Unit is 97 percent forest, the most heavily forested county in the State (table 1).

Forest land Statewide declined one million acres or 5.2 percent between 1966 and 1980 inventories. A comparison of areas from the two inventories by geographical regions shows that the greatest reduction in forest area—almost 11 percent—occurred in the southern half of the Lower Peninsula (table 2).

Commercial forests (land suitable for growing crops of wood and not reserved from utilization) now occupy 17.5 million acres or 95 percent of Michigan's forest land. Since 1966, commercial forests have declined almost 1.4 million acres from 18.9 to 17.5 million acres a 7.3 percent reduction (table 3).

In looking at the State in sections, we can note the different rates of change in the commercial forest land base (table 3). As with total forest land, the greatest reduction occurred in the Southern Lower Michigan Unit where commercial timber land decreased by 12.4 percent. In the Upper Peninsula commercial forest land decreased by 8.4 percent. The Northern Lower Michigan Unit had the smallest decrease—3.7 percent or 260 thousand acres (table 3).

Only 5 percent or 879,000 acres of Michigan's forests are classified as noncommercial. Of this, 622,000 acres are productive forest land, but reserved for uses other than timber production such as parks and other reserved recreation areas. The remaining 257,000 acres are forest land too poor to grow timber crops. The 363,000-acre increase in noncommercial forest land between inventories is the result of additions to the productive reserved forest base (table 4). These additions primarily include National Lakeshore Areas, State Parks, State Sharptail Grouse Management Areas, and State Recreation Areas.

The sampling error for the 17.5 million acres of commercial forest area for this inventory was ±.33 percent.

This forest inventory was conducted by the North Central Forest Experiment Station. More intensified field sampling was made possible by additional funding and personnel provided by the Michigan Legislature through the State's Department of Natural Resources and by interested forest industry companies.

Table 1.—*Area of land and forest land by county, Michigan, 1980*

County	All land[1]	Forest land[2]			Commercial forest as a percent of land area	All forest as a percent of land area
		All forest	Non commercial[3]	Commercial[4]		
	Thousand acres				*Percent*	
EASTERN UPPER PENINSULA UNIT						
Alger	578.9	530.7	38.8	491.9	85	92
Chippewa	1,017.6	757.5	51.6	705.9	69	74
Delta	753.0	596.8	22.3	574.5	76	79
Luce	580.1	496.5	28.1	468.4	81	86
Mackinac	649.1	565.0	40.7	524.3	81	87
Menominee	664.3	496.2	2.8	493.4	74	75
Schoolcraft	56.0	588.9	45.7	543.2	72	78
Total	4,999.0	4,031.6	230.0	3,801.6	76	81
WESTERN UPPER PENINSULA UNIT						
Baraga	576.5	539.8	26.6	513.2	89	94
Dickinson	484.6	381.0	4.4	376.6	78	79
Gogebic	708.4	654.6	34.7	619.9	88	92
Houghton	650.9	533.7	20.0	513.7	79	82
Iron	749.5	664.7	10.7	654.0	87	89
Keweenaw	344.1	333.1	126.0	207.1	60	97
Marquette	1,170.4	1,026.9	56.5	970.4	83	88
Ontonagon	842.0	724.7	50.0	674.7	80	86
Total	5,526.4	4,858.5	328.9	4,529.6	82	88
NORTHERN LOWER PENINSULA UNIT						
Alcona	433.6	318.9	12.4	306.5	71	74
Alpena	361.3	222.6	4.9	217.7	60	62
Antrim	304.3	159.9	3.3	156.6	51	53
Arenac	235.2	94.4	1.7	92.7	39	40
Bay	286.2	20.1	2.3	17.8	6	7
Benzie	201.9	131.0	9.9	121.1	60	65
Charlevoix	265.1	139.1	0.5	138.6	52	52
Cheboygan	461.2	383.0	16.4	366.6	79	83
Clare	365.4	219.9	4.2	215.7	59	60
Crawford	359.3	304.8	31.9	272.9	76	85
Emmet	294.7	202.2	7.0	195.2	66	69
Gladwin	322.2	193.1	0.3	192.8	60	60
Grand Traverse	295.8	154.4	2.2	152.2	51	52
Iosco	347.9	231.9	7.3	224.6	65	67
Isabella	365.9	78.4	—	78.4	21	21
Kalkaska	362.0	275.3	22.0	253.3	70	76
Lake	365.3	300.0	0.2	299.8	82	82
Leelanau	220.5	94.1	18.3	75.8	34	43
Manistee	353.9	225.7	0.2	225.5	64	64
Mason	313.4	156.0	8.0	148.0	47	50
Mecosta	358.4	125.2	2.5	122.7	34	35
Midland	332.7	149.8	2.3	147.5	44	45
Missaukee	361.3	212.5	8.1	204.4	57	59
Montmorency	355.2	302.3	0.3	302.0	85	85
Newaygo	543.7	316.3	6.3	310.0	57	58
Oceana	343.2	160.0	11.7	148.3	43	47
Ogemaw	365.7	235.3	15.8	219.5	60	64
Osceola	371.8	158.5	1.7	156.8	42	43
Oscoda	360.2	309.9	2.7	307.2	85	86
Otsego	337.5	262.9	2.1	260.8	77	78
Presque Isle	414.6	277.6	10.7	266.9	64	67
Roscommon	333.4	252.8	6.1	246.7	74	76
Wexford	357.9	261.7	11.4	250.3	70	73
Total	11,350.7	6,929.6	234.7	6,694.9	59	61

(table 1 continued)

(Table 1 continued)

SOUTHERN LOWER PENINSULA UNIT

County	All land[1]	Forest land[2]			Commercial forest as a percent of land area	All forest as a percent of land area
		All forest	Non commercial[3]	Commercial[4]		
	Thousand acres				*Percent*	
Allegan	528.6	137.4	—	137.4	26	26
Barry	354.7	119.9	8.7	111.2	31	34
Berrien	371.0	67.3	1.2	66.1	18	18
Branch	323.8	44.1	—	44.1	14	14
Calhoun	453.9	76.6	0.5	76.1	17	17
Cass	314.0	54.0	—	54.0	17	17
Clinton	366.0	31.0	0.5	30.5	8	8
Eaton	365.5	45.5	—	45.5	12	12
Genesee	410.9	44.0	—	44.0	11	11
Gratiot	361.9	27.4	—	27.4	8	8
Hillsdale	384.3	45.6	0.6	45.0	12	12
Huron	524.2	57.4	1.3	56.1	11	11
Ingham	357.7	42.1	—	42.1	12	12
Ionia	367.8	38.6	1.4	37.2	10	10
Jackson	446.8	87.4	4.0	83.4	19	20
Kalamazoo	359.5	73.4	6.8	66.6	19	20
Kent	548.5	123.6	1.0	122.6	22	23
Lapeer	420.8	83.5	2.5	81.0	19	20
Lenawee	481.9	48.2	0.5	47.7	10	10
Livingston	366.0	78.1	9.0	69.1	19	21
Macomb	307.3	46.2	1.2	45.0	15	15
Monroe	356.5	35.2	0.1	35.1	10	10
Montcalm	455.9	145.3	—	145.3	32	32
Muskegon	320.9	165.8	1.2	164.6	51	52
Oakland	554.7	104.3	22.1	82.2	15	19
Ottawa	360.4	77.7	0.2	77.5	22	22
Saginaw	520.7	82.7	—	82.7	16	16
St. Clair	469.6	89.0	1.1	87.9	19	19
St. Joseph	323.6	59.9	—	59.9	19	19
Sanilac	615.0	50.2	0.1	50.1	8	8
Shiawassee	345.4	52.8	—	52.8	15	15
Tuscola	521.5	83.7	—	83.7	16	16
Van Buren	385.6	106.2	4.2	102.0	26	28
Washtenaw	454.7	82.8	10.8	72.0	16	18
Wayne	387.2	42.2	6.7	35.5	9	11
Total	14,486.8	2,549.1	85.7	2,463.4	17	18
State Total	36,362.9	18,368.8	879.3	17,489.5	48	51

[1]1970 Bureau of the Census estimates.

[2]Land at least 16.7 percent stocked by forest trees of any size, or formerly having such tree cover; excludes land currently developed for nonforest use such as urban or heavily settled residential or resort area, city parks, orchards, improved roads, or improved pasture land. The minimum forest area classified was 1 acre. Classified as forest were roadside, streamside, and shelterbelt strips of timber with a crown width of at least 120 feet and unimproved roads and trails, streams, and clearings in forested areas if less than 120 feet wide.

[3]Unproductive forest land incapable of yielding crops of industrial wood because of adverse site conditions, and productive public forest land withdrawn from commercial timber production through statute or administrative regulation.

[4]Forest land producing or capable of producing crops of industrial wood and not withdrawn from timber utilization by statute or administrative regulation.

Table 2.—*Area of forest land by forest survey unit for 1966 and 1980, Michigan*

Unit	Survey year 1966[1]	1980	Change since 1966	
	Thousand acres			*Percent*
Eastern Upper Peninsula	4,281.3	4,031.6	-249.7	-5.8
Western Upper Peninsula	5,183.3	4,858.5	-324.8	-6.3
Northern Lower Peninsula	7,051.7	6,929.6	-122.1	-1.7
Southern Lower Peninsula	2,857.1	2,549.1	-308.0	-10.8
State total	19,373.4	18,368.8	-1,004.6	-5.2

[1]Figures have been adjusted from those published after the 1966 survey to conform to 1980 areas because of changes in survey procedure and definitions.

Table 3.—*Area of commercial forest land by forest survey unit for 1966 and 1980, Michigan*

Unit	Survey year 1966[1]	1980	Change since 1966	
	Thousand acres			*Percent*
Eastern Upper Peninsula	4,169.1	3,801.6	-367.5	-8.8
Western Upper Peninsula	4,920.9	4,529.6	-391.3	-8.0
Northern Lower Peninsula	6,955.1	6,694.9	-260.2	-3.7
Southern Lower Peninsula	2,812.2	2,463.4	-348.8	-12.4
State total	18,857.3	17,489.5	-1,367.8	-7.3

[1]Figures have been adjusted from those published after the 1966 survey to conform to 1980 areas because of changes in survey procedure and definitions.

Table 4.—*Area of noncommercial forest land by forest survey unit for 1966 and 1980, Michigan*

Unit	Survey year 1966[1]	1980	Change since 1966	
	Thousand acres			*Percent*
Eastern Upper Peninsula	112.2	230.0	+117.8	+105.0
Western Upper Peninsula	262.4	328.9	+ 66.5	+ 25.3
Northern Lower Peninsula	96.6	234.7	+138.1	+143.0
Northern Lower Peninsula	44.9	85.7	+ 40.8	+ 90.9
State total	516.1	879.3	+363.2	+ 70.4

[1]Figures have been adjusted from those published after the 1966 survey to conform to 1980 areas because of changes in survey procedure and definitions.

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